

ABSTRACT OF THE INVENTION

Presented is a system and method for providing centralized address management of static IP addresses through the dynamic host control protocol. Static or permanent IP addresses are those addresses assigned by DHCP having an infinite lease time. The assignment of such static IP addresses follows the conventional DHCP mechanism for the assignment of other IP addresses. However, the centralized reclamation of a statically or permanently assigned IP address by a network administrator through the DHCP server presents novel aspects of the invention heretofore unknown. Specifically, through the system and method of the present invention, the DHCP server is capable of reclaiming at any point in time, a statically or permanently assigned IP address by transmitting a DHCP RECLAIM command to the DHCP client, or through its relay agent. In the normal situation, the DHCP client acknowledges the RECLAIM command, allowing the IP address to be placed in the FREE state. If, however, the DHCP client does not respond or the responses are not received by the DHCP server, the DHCP server marks the state of the IP address as DEPRECATED. The state of the IP address will be changed from DEPRECATED to FREE once a number of retries of the RECLAIM process has been completed, or a maximum period of time has passed. Security mechanisms to prevent a malicious attacker from reclaiming static IP address from DHCP clients are also presented.

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